

VASA, J.

Water-surface evaporation in Bohemia. (To be contd.)

p. 182  
Vol. 5, no. 6, June 1955  
VODNI HOSPODARSTVI  
Praha

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 3  
March 1956

VASA, J.

VASA, J. Water-surface evaporation in Bohemia. (Conclusion) p. 222.

Vol. 5, No. 7/7a, July 1955

VODNI HCSPONARSTVI

TECHNOLOGY

Praha, Czechoslovakia

So: East European Accessions, Vol. 5, No. 5, May 1956

VASA, J.

Determination of soil hydraulic constants. p. 104.

VODNI HOSPODARSTVI. (Ustredni sprava vodniho hospodarstvi)  
Praha, Czechoslovakia  
No. 3, Mar. 1959.

Monthly list of East European Acessions (EEAI), LC, Vol. 8, no. 7  
July 1959  
Uncl.

VASA, J., inz.

International Hydrologic Decade. Vodni hosp 14 no.4:142  
'64.

KRIZ, V.; VASA, J.

International Hydrological Decade. Meteor zpravy 17 no.5:  
156-158 0 '64.

1. Hydrometeorological Institute, Prague; Hydraulic Research  
Institute, Prague.

KRIZ, Vladimir, inz. promovany geograf; VASA, Jiri, inz. CSc.

International cooperation in hydrology. Vod hosp 15 no.1:2-4 '65.

1. Hydrometeorological Institute, Ostrava (for Kriz). 2. Research  
Institute of Water Resources Management, Prague (for Vasa).

Vadnai, P.

Equipment to produce coal dust in concrete plants. ( To be con't.) p. 241.  
(EPITBANYAG. Vol. 7, no. 7, July 1955. Budapest.)

SO: Monthly List of East European accession. (EMAL). Lc. Vol 1 Nov. 11 Nov. 1955 Encl.

VASADI, F.

Equipment to produce coal dust in cement plants. p. 318.  
Vol 7, no. 8, Aug. 1955. EPITOANYAG. Budapest, Hungary!

So: Eastern European Accession. Vol 5, no. 4, April 1956



VASADI, F.

VASADI, F. - Development of the Hungarian industry, - p. 137  
Corrosion and protection of surfaces. p. 145  
Vol. 8, no. 4 - April 1956  
GEP - Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4 - April 1957

VASADI, F.

Ventilation of dry-grinding ball mills. p.233. EPITOANYAG.  
Budapest. Vol. 8, no. 6, June 1956.

SOURCE: East European Accessions List (EEAL), Library of Congress  
Vol. 7, No. 12, December 1956

VASADI, Ferenc

Gas-fired limekilns and the current problems of lime kilning.  
Epitoanyag 14 no.12:446-455 D '62.

VASADI, L.

VASADI, L. - Elektrotechnika - Vol. 48, no. 5, May 1955.

Excerpts from the opening address at the exhibition "Ten Years of Strong-  
Current Industry," March 19, 1955. p. 167.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept., 1955  
Uncl.

VASADI, Laszlo, okleveles gepeszmernok

The 50-year-old Electric Machine and Cable Factory.  
Elektrotechnika 56 no.11/12:477-478 N-D'63.

1. Villamosgep- es Kabelgyar igazgatoja; Egyesult Villamos-  
gepgyar vezeregazgatoja, Budapest, X., Gyomroi ut 128.

TEMESVARY, Ferenc; VASADI, Peter (Budapest XV., Magyar u. 6); FORINTOS, Erno  
(Gyor, Attila u. 13); NEMENYI, Gyula (Miskolc)

Motorists' letters. Auto motor 14 no. 9:6 My '61.

1. Magyar Nemzeti Muzium tudomanyos munkatarsa, Budapest (for Temesvary).

VASADI, S.

"Some Problems of Regulating and Securing Railroad Track Curves", P. 272  
(KOZLEKED ESTUDOMANYI SZEMLE, Vol. 4, No. 7/8, July/Aug. 1954, Budapest,  
Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,  
No. 1, Jan. 1955, Uncl.

VASALY-KOVACS, Ferenc

Geological and geophysical research in the Velence Mountains.  
Geofiz kozl 11 no.1/4:119-151 '62.



VASADY-KOVACS, Ferenc

Geological and geophysical research in the Velence Mountains.  
Geofiz kozl 11 1/4:120-151 '62.

USSR / Human and Animal Physiology. The Effect of                   T  
Physical Factors. Ionizing Irradiations.

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102372.

Author : Vasadze, G. Sh.

Inst : Tbilissi Medical Institute.

Title : On the Change of Reflex Regulation of Blood C'r-  
          culation and Respiration Under the Combined Effect  
          of X-Rays and Intestinal Injury on the Animal Or-  
          ganism.

Orig Pub: Tr. Tbilissk. med. in-t, 1957, 14, 149-161.

Abstract: The development of shock was studied after injury  
          of the small intestine of a dog and after injury  
          in combination with irradiation with intensity of  
          dose 2.8 and 3.7 r/min. The injuries of the intes-  
          tine induced the development of shock in 75-80%

Card 1/2

137

USSR / Human and Animal Physiology: The Effect of  
Physical Factors, Ionizing Irradiation.

T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102372.

Abstract: of animals. The fall of the degree of carotid sinus reflexes (CR) commenced after 1-2 hours. The depressive CR increased at first and then decreased. A fast decrease of CR was an unfavorable prognostic sign. The changes of pulmonary ventilation were analogous to the changes of CR, but the phasic condition of respiratory reflexes, in frequency as well as in pulmonary ventilation, usually developed earlier than CR. The phase of increase of CR lengthened after irradiation, with their subsequent deeper decrease; the deep phases of parabolic inhibition were also more frequently observed. -- L. I. Samaylova.

Card 2/2

VASADZE, G.Sh. (Leningrad)

Using neuroplegic preparations in the compound treatment of penetrating wounds of the small intestine [with summary in English]. Pat.fiziol. i eksp.terap. 1 no.6:46-51 N-D '57. (MIRA 11:3)

1. Iz kafedry patologicheskoy fiziologii Voenno-meditsinskoy akademii ordena Lenina im. S.M.Kirova. (nachal'nik kafedry - chlen-korrespondent AMN SSSR prof. I.R.Petrov)

(INTESTINE, SMALL, wounds and injuries,  
ther., neuroplegic drugs with other prep. (Rus))

WASHER 1 3/4

GUBLER, Ye.V.; KOVALENKO, Ye.A.; VASADZE, G.Sh.; GARBER, Ye.I.

Recording conditioned and unconditioned respiratory reflexes by measuring pulmonary ventilation. Fiziol.zhur. 43 no.6:582-585 Je '57. (MIRA 10:12)

1. Kafedra patologicheskoy fiziologii Voenno-meditsinskoy ordena  
Lenina akademii im. S.M.Kirova.

(RESPIRATION, physiol.

recording method of reflexes by measurement of pulm.  
ventilation in dogs)

(REFLEX

same)

VASADZE, G.Sh.; SHERASHOV, S.G.

Change in sensitivity to visceral trauma of animals in radiation sickness. Med.rad. 4 no.10:59-66 0 '59. (MIRA 13:2)

1. Iz kafedry patologicheskoy fiziologii (nach. - chlen-korrespondent AMN SSSR prof. I.P. Petrov) Voenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(RADIATION INJURY exper.)

(WOUNDS AND INJURIES exper.)

SOCHIVKO, L.F.; DERNOVSKAYA-ZELENTSOVA, G.L.; VASADZE, G.Sh.;  
KOCHETYGOV, N.I.

OP-01 flow oxyhemometer, a new apparatus for the determination of  
blood saturation with oxygen. Pat.fiziol.eksp.terap. 4 no.1:71-  
73 Ja-F '60. (MIRA 13:5)

1. Iz konstruktorsko-tekhnologicheskogo byuro "Biofizpribor"  
(nach. - glavnyy konstruktor G.V. Rusakov) i kafedry patofizio-  
logii (zav. - chlen-korrespondent AMN SSSR prof. I.R. Petrov)  
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.  
(OXIMETRY equip. & supply)

VASADZE, G.Sh., kand.med.nauk (Leningrad, Lesnoy pr., d.4, kv.55)

Effectiveness of compound treatment of agonal states in severe shock and hemorrhage. Vest.khir. no.5:18-24 '61. (MIRA 15:1)

1. Iz kafedry patologicheskoy fiziologii (nach. - prof. I.P. Petrov) Voenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(SHOCK)

(HEMORRHAGE)

(DEATH)



VASADZE, G.Sh. (Leningrad).

Restoration of vital body functions during the agonal state  
developing following severe shock and hemorrhage. Pat. fiziol.  
1 eksp. terap. 5 no.4:34-39 JI-Ag '61. (MIRA, 14:9)

1. Iz kafedry patologicheskoy fiziologii (nachal'nik - deystvitel'nyy  
chlen AMN SSSR prof. I.R.Petrov) Voenno-meditsinskoy ordena  
Lenina akademii imeni S.M.Kirova.  
(HEMORRHAGE) (SHOCK) (DEATH)

VASADZE, G.Sh.; KUDRITSKAYA, T.Ye. (Leningrad)

Complex therapy of burn shock. Pat. fiziol. i eksp. terac. 6  
no.4:34-38 JI-Ag '62. (MIRA 17:8)

1. Iz kafedry patologicheskoy fiziologii (nachal'nik - deyst-  
vitel'nyy chlen AMN SSSR prof. I.R. Petrov) Voenno-meditsinskoy  
ordena Lenina akademii imeni Kirova.

SOCHIVKO, L.F.; VASADZE, G.Sh.; PAVLOVA, A.M. (Leningrad)

Flow-type oxyhemograph (type POG-01), a device for the continuous recording of the degree of oxygen saturation of the blood. Pat. fiziol. i eksp. terap. 6 no.6:80-81 N-D'62 (MIRA 17:3)

1. Iz konstruktorskogo tekhnologicheskogo byuro "Biofizpribor" (nachal'nik - glavnyy konstruktor G.V. Rusakov) i kafedry patologicheskoy fiziologii (nachal'nik - deystvitel'nyy chlen AMN SSSR prof. I.R. Petrov) Voenno-meditsinskoy ordena Lenina akademii imeni Kirova, Leningrad.

VASADZE, G. Sh.

Method of determining the hematocrit count with the aid of polyethylene tubes. Lab. delo 8 no. 10:16-19 '62. (MIRA 17:4)

1. Laboratoriya eksperimental'noy patologii (zav. - kand. med. nauk G. Sh. Vasadze) Nauchno-issledovatel'skogo instituta travmatologii i ortopedii (direktor - dotsent G.G. Tatishvili) Ministerstva zdravookhraneniya Gruzinskoy SSR.

ACC NR: AP6034103

SOURCE CODE: UR/0089/66/021/004/0300/0302

AUTHOR: Tskhvirashvili, D. G.; Vasadze, L. Ye.; Tsukh, A. S.

ORG: none

TITLE: Distribution of the corrosion products of structural materials and neutron irradiation

SOURCE: Atomnaya energiya, v. 21, no. 4, 1966, 300-302

TOPIC TAGS: corrosion, neutron irradiation, boiling water reactor, aluminum, carbon steel, radioactivity measurement

ABSTRACT: The authors describe experiments on the determination of the coefficients of distribution of corrosion products of aluminum and carbon steel in an experimental apparatus made of 1Kh18N9T stainless steel irradiated with neutrons and kept under a pressure of 78—176 bar. The main purpose of the investigation was to ascertain what fraction of the corrosion products finds its way from water into steam in boiling-water reactors. The test apparatus (Fig. 1) was designed to be filled with a prescribed amount of bidistillate and kept in the reactor channel for a specified time. Samples of steam and water were then taken, and if the activity of the steam sample exceeded the background activity, the experiment was regarded as complete; otherwise, the experiment was continued. The main activity was produced by  $\text{Na}^{24}$  in the case of aluminum and  $\text{Co}^{58}$  or  $\text{Fe}^{59}$  in the case of carbon steel. The experimental results were plotted in the form of the dependence of the distribution coefficient (the ratio of

Card 1/2

UDC: 621.039.534.4

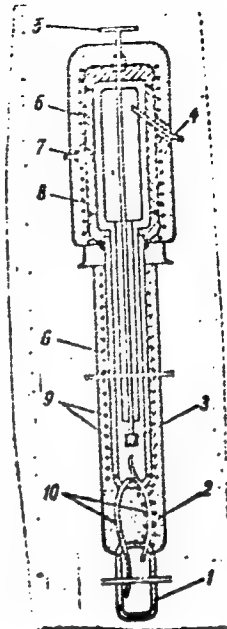
ACC NR: AP6034103

Fig. 1. Diagram of measuring apparatus. 1 - Cartridge; 2 - heat insulation; 3 - filter; 4 - steam sampling; 5 - tee; 6 - steam jacket; 7 - tube to manometer; 8 - housing; 9 - electric heaters; 10 - circulation tubes.

the activities of the samples of steam and water) on the ratio of the solvent phase densities. The distribution coefficients of  $\text{Na}^{24}$  agree well with the distribution coefficients of NaOH in the absence of neutron irradiation. In the case of steel, the distribution coefficients turn out to be close to those of the corrosion products of other heavy metals (Co, Ni, Cu, Mn, Cr). These distribution coefficients are appreciable not only at super-high pressures but also at medium pressures, and neutron irradiation has no influence on the transition of the corrosion products to the vapor state, the governing factor being the radius of the hydrate molecule, which is not changed by neutron bombardment. Orig. art. has: 4 figures.

SUB CODE: 18/ SUBM DATE: 12Mar66/ ORIG REF: 007

Card 2/2



VASADZE, Ye. I., Cand Biol Sci -- (diss) <sup>K.A.</sup> "Timiryazev as a militant Darwinist."  
~~Darwinist~~  
Kiev, 1958. 19 pp (Min of Higher Education Ukr SSR, Kiev State Univ im T. G.  
Shevchenko), 100 copies (KL, 18-58, 97)

-34-

VASADZE, Ye. N.; TKHINVALI, G. Kh.

Turbodrilling of mine shafts. Azerb. neft. khoz. 37 no. 8:  
21-24 Ag '58. (MIRA 11:11)  
(Shaft sinking)



VASAITIS, J.

Data for anatomical studies on bronchopulmonary segments. Sveik. apsaug.  
7 no.6 (78):23-28 Je '62.

1. Respublikine Siauliu ligonine.  
(LUNGS) (BRONCHI)



L 61563-65

ACCESSION NR APO14342

ALTHORP. 1882A, J. L. 1882B, 1882C.

THE  
JOURNAL OF THE  
ROYAL ANTHROPOLOGICAL INSTITUTE

SOURCE: Letectvi - kosmonautika, no. 11, 1968, 358-360

TOPIC TAGS: powered glider, sailplane, auxiliary engine

**ABSTRACT:** In the summer of 1963, Engineer V. Frits and a group at the Le Mans Aeroclub near Prague conceived the idea of building a motor sailplane with an auxiliary engine to facilitate starting and ending the glider home after long flights. They chose the Planic V-12 engine to power the auxiliary engine. The engine was modified to operate on kerosene and to start on a battery. The engine was mounted in the fuselage of the glider and the fuel system was designed to operate on kerosene. The engine was modified to operate on kerosene and to start on a battery. The engine was mounted in the fuselage of the glider and the fuel system was designed to operate on kerosene.

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L 61563-65

ACCESSION NR: A25014340

takeoff, cruises 100 km/hr. at 2200 rpm, attains a maximum speed of 120 km/hr. at 2550 rpm, and consumes 10 liters of gasoline per hour at 2200 rpm. Orig. art. has 2 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: AC

NO REF SOV: 000

OTHER: 000

Card 2/2



C-4 - *then. Extraction + ...*  
*(then. Miscellaneous)*

*Br. Abs.*

4118. Diethyldithiocarbamate as reagent in volumetric analysis.  
 V. Sedivcov and V. Valch (Coll. Trav. chim. Tchecosl., 1960, 18,  
 52-54).—Some Org. S compounds can be used as reagents in pptn.  
 titrations. Na diethyldithiocarbamate is used as a volumetric  
 reagent in the potentiometric titration of Ag, Cu, Cd, Pb, Zn,  
 and Ni. Several interfering effects are eliminated by continuously  
 extracting the pptd. complexes formed into ether during the  
 titration. Directions are given for the accurate determination of  
 single cations. Two or more metals which form complexes with  
 different solubility products may be titrated successively.  
 J. E. STANNERS.

17 7

**"The Use of Complexes in Chemical Analysis. IX.—The Colorimetric Determination of Copper by Sodium Diethyldithiocarbamate.** V. Nedivce and V. Vasek, (*Coll. Trav. Chim. Technol.*, 1950, 18, (5:6), 290-296).—[In English]. Cf. *ibid.*, (3:4), 132; *Met. Abs.*, this vol., p. 201. Stable complexes which are unaffected by sodium diethyldithiocarbamate are formed by Ni, Co, Mn, and Fe with ethylenediamine tetra-acetic acid, permitting the separation of Cu into ethyl acetate and subsequent colorimetric determination. Further possible applications of the selective extraction of cations are noted.

—P. M. L.

2:00 p.m. 1950

B.C.

1024. Application of complexones in colorimetry. Determination of mercury using dithizone. V. Vashk and V. Sedivec (Coll. Trav. chim. T. Masov., 1960, 28, 1076-1084). For the detection of Hg a sufficient quantity of complexone III ( $\text{Na}_2$  ethylenediaminetetra-acetate) is added to the solution and the acidity is reduced by addition of acetate buffer. The solution is then shaken with a small amount of dithizone in  $\text{CCl}_4$ , when the presence of Hg is indicated by a colour change in the org. layer from green to orange. Ag may be extracted from a mixture of metal complexones by dithizone in an analogous manner. In neutral or slightly alkaline solutions a mixture of the orange-yellow keto-form and the purple-red enolic complex is formed. The former is sol. in  $\text{CCl}_4$ , the latter is dispersed in the solvent and can be accumulated at the phase-boundary by centrifugation in a micro-test-tube. This ppt. is one of the specific features in the identification of Ag. If a sufficient amount of CNS<sup>-</sup> is added to the solution, all the Ag present can be converted into a Ag-CNS complex, more stable than the Ag-dithizone complex: when the mixture is shaken, the Ag passes back into the aq. phase and the org. layer changes in colour from red to the original green of free dithizone. The detection of Hg can be made specific even in the presence of Ag if, in addition to the complexones, sufficient KCNS is added to the solution to screen the Ag present. For the determination of Hg by single-colour colorimetry, the Hg is extracted from weakly acid solution in the presence of complexone (37.5 g. of  $\text{Na}_2$  ethylene diamine tetra-acetate in 1 l. of distilled water) with a solution of dithizone in  $\text{CCl}_4$  (0.75 mg. in 100 ml. of  $\text{CCl}_4$ ) and the excess of

dithizone is removed from the org. layer by extraction with very dil.  $\text{NH}_4\text{OH}$ . Only the orange Hg dithizone complex remains in the org. layer. This can be determined colorimetrically either directly or, more conveniently, after extraction of the Hg as the  $\text{HgI}_2$  complex by treatment of the dithizone complex with aq. KI. After this operation only the intensely green free dithizone remains in the org. layer in an amount equivalent to the Hg originally present and this solution is subjected to colorimetry by the normal procedure. The method is liable to a number of errors and the following two-colour colorimetry method is preferred. The solution to be analysed, containing excess complexone, is extracted with a known vol. of a  $\text{CCl}_4$  solution of dithizone. A mixture of the orange  $\text{Hg}$ -dithizone complex and of the green free dithizone is thus obtained, the resultant colour being determined by the ratio of the two compounds. The intensity of coloration of either component can be measured at will by using a green filter ( $\lambda$  500 m $\mu$ ) for the  $\text{Hg}$ -dithizone complex, and an orange filter ( $\lambda$  620 m $\mu$ ) for the excess complexone. In practice, the solution to be analysed (80-100 ml. containing up to 30  $\mu\text{g}$ . of Hg) is placed in a tap funnel of  $\sim 150$  ml. capacity. Buffer solution (10 ml.) is added, and sufficient complexone to combine with all the accompanying metals. The solution is now extracted with exactly 20 ml. of dithizone solution by shaking thoroughly for 30 sec. The  $\text{CCl}_4$  layer is run off through a small filter-paper directly into the colorimetric cell and the absorption measured using an orange filter. H. WARR.



CA

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The use of complexons in colorimetry. II. Determination of mercury with dithizone. Vladimír Valák and Václav Sedivec (Charles Univ., Prague, Czech). *Chem Listy* 45, 10-12 (1951); cf. *C.A.* 45, 3290g.—Hg can be detd. colorimetrically by means of dithizone (I) in the presence of complexon III [di-Na salt of  $(HO_2CCH_2)_3N(CH_2)_4N(CH_2CO_2H)_3$ ] (II). To a 50-100 ml. soln. contg. about 60  $\gamma$  Hg add 5 ml. *N* AcOH and 5 ml. *N* AcONa and sufficient II to mask other elements present in the sample. Ext. the soln. with 20 ml. soln. of I in  $CCl_4$  by 30-sec. shaking. Remove the  $CCl_4$  layer, filter into the colorimetric cell, and measure the extinction with an orange filter (620 m $\mu$ ) to eliminate the color of excess I. In the presence of Ag, excess KSCN must be added to eliminate Ag from the complex with II. Other heavy metals do not interfere as they are masked by II. The method is also suitable for detecting Ag and Hg. M. Hudlický

1951

*Analytical Chemistry*

CA

**New way of removing disturbing effects of some metals in the colorimetric determination of copper with diethyl dithio-**

carbamate. Václav Sečivý and Vladimír Valík (Charles Univ., Prague, Czech.). *Chem. Listy* 43, 435-7 (1951). — The colorimetric detn. of Cu was carried out in a soln. obtained by extg. the aq. Cu(II) solns. with a CHCl<sub>3</sub> soln. of PhSCSNEt<sub>3</sub> (1). 1 was prepd. by dissolving 0.2 g. Ph(OAc)<sub>3</sub> in H<sub>2</sub>O, adding 10 ml. 10% K<sub>2</sub>Na tartrate, making alk. with 10 ml. 10% KCN, adding 0.25 g. NaSCSNEt<sub>3</sub>, extg. the white ppt. with 50 ml. CHCl<sub>3</sub>, washing the ext. with redistd. H<sub>2</sub>O, filtering, and dilg. with CHCl<sub>3</sub> to 200 ml. The presence of Ni, Co, Mn, and Fe did not interfere. Procedure for the detn. of Cu in alloys and ores: a 1-g. sample is dissolved in HNO<sub>3</sub> or aqua regia, dild., filtered, and dild. with redistd. water to 200-1000 ml. A 5-20 ml. aliquot is dild. with H<sub>2</sub>O, mixed with acetate buffer, extd. with 25 ml. 1, and absorption measured in a green light.

M. Hudlický

CA

*Analytical Chemistry 7*

Indirect colorimetric determination of mercury. Vladimír Váňák and Václav Bedívec (Charles Univ., Prague, Czech.). *Chem. Listy* 45, 437-0(1951); cf. C.A. 46, 4947c. Colorimetric detn. of Hg is based on the decrease of coloration of a known soln. of  $\text{Cu}(\text{SCSNEt}_2)_2$  (I) by  $\text{Hg}(\text{II})$ , which forms less-sol.  $\text{Hg}(\text{SCSNEt}_2)_2$ . I is prepd. as follows: To 50 ml. of a soln. contg. 0.03142 g.  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  dissd. with 250 ml.  $\text{H}_2\text{O}$  is added excess  $\text{NaSCSNEt}_2$  and a few ml. aq.  $\text{NH}_3$ . The ppt. is extd. with 1000 ml.  $\text{CCl}_4$ , the ext. washed with  $\text{H}_2\text{O}$  and dissd. to 2000 ml.  $\text{Hg}(\text{II})$  is detd. by the following procedure: A soln. of  $\text{Hg}(\text{II})$  (200 ml.) is treated with an acetate buffer (equal parts of  $\text{N}$   $\text{AcOH}$  and  $\text{N}$   $\text{AcONa}$ ) and extd. with 25 ml.  $\text{I}$ . After shaking 1 min. the  $\text{CCl}_4$  layer is filtered, and the decrease in concn. of  $\text{I}$  is measured. The Hg content is estd. from a curve. M. Hudlický

1A

✓ Colorimetric determination of arsenic. Vladimír Valák and Václav Sedláček (Charles Univ., Prague, Czech.). *Chem. Listy* 46, 341-4 (1952).—AsH<sub>3</sub> develops with a C.H.N soln. of AgSCNHEt<sub>3</sub> (1) a red to red-violet coloration which makes possible the detection of 0.5 γ As. H<sub>2</sub>S must be removed prior to the reaction with Pb(OAc)<sub>2</sub> paper. SbH<sub>3</sub> develops a different shade, and PH<sub>3</sub> does not interfere. The reaction is suitable for the colorimetric estn. of As, especially in mineralized biol. material. *Procedure:* Heat 5-25 g. of sample with 10-25 ml. HNC<sub>3</sub> and 5 ml. H<sub>2</sub>SO<sub>4</sub> until fumes of H<sub>2</sub>SO<sub>4</sub> escapes. Mix the cooled soln. with 10 ml. H<sub>2</sub>O and 5 ml. satd. (CO<sub>2</sub>NH<sub>4</sub>)<sub>2</sub> and again heat, then dil. with H<sub>2</sub>O to 25-30 ml. Mix 20-ml. aliquot with 5 ml. HCl, 2 ml. 15% KI, and 0.5 ml. of a 40% soln. of SnCl<sub>2</sub> and allow the mixt. to stand 15 min. Then treat with 3 g. Zn. Evolution of AsH<sub>3</sub> lasts 30-60 min., absorb the gas in I, and measure the light absorption with a green filter.

M. Hudlický

VASAK, V.; SEDIVEC, V.

Colorimetric determination of arsenic [with summary in English].  
Sbor.Cekh.khim.rab. 18 no.1:64-72 F '53. (MIRA 7:6)

1. Department of Inorganic and Forensic Chemistry, Charles University,  
Prague. (Colorimetry) (Arsenic)

V1121K, Y

✓ Sulfur compounds in the atmosphere of viscose rayon factories. J. Roubal, V. Sedivec, and V. Vašák (Charles Univ., Prague). *Průmysl Lékařství* 5: 336-40 (1953). COS was not found in the atm., although its formation was postulated during the manufg. process. Me mercaptan was either not present or its concn. was so small that it could not be detected from the polarographic curves. The polarographic method of Zuman, et al., (C.A. 48, 3100g) was useful if H<sub>2</sub>S was first removed from the atm. by inserting a cotton filter impregnated with Pb acetate in front of the absorption vessel. L. J. Urbánek

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Procedure: In a separate flask, mix a 10% solution of the sample with 10% of the standard solution. Measure the extinction at 534 mμ. To an amount of 1 add the sample containing. And follow the above procedure regardless of separate MS value. Value for S is obtained by multiplying R by 0.0043. (S. Glass)

VASAK, V.; MACHALEK, V.

Vasak, V.; Machalek, V. "Colorimetric determination of alkali sulphides. p. 250  
CASOPIS PRO VYSTOVANI MATEMATIKY. CZECHOSLOVAK MATHEMATICAL JOURNAL. Vol. 47 No. 6  
June 1953, Praha, Czechoslovakia.

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, L. C. Vol. 3 No. 1 Jan. '54 Incl.



VASAK VLADIMIR

4

③

Polarographic determination of carbonyl sulfide. Vác-  
lav Sedivý and Vladimír Vašík (Ústav hyg. práce, Prague,  
Czech.). Chem. Listy 48, 19-27(1954).—The detn. is  
based on the reaction of COS with an EtOH soln. of Et<sub>3</sub>NH;  
the diethylmonothiocarbamic acid formed is polarographically  
active and gives an anodic wave at -0.32 v. It is possible  
to det. COS in the presence of H<sub>2</sub>S, mercaptans, and CS<sub>2</sub>.  
The method has been used for the analyses of illuminating  
and generator gases. Procedure: Absorb the gas in 1%  
EtOH soln. of Et<sub>3</sub>NH. To 10 ml. of this soln., add 1 ml.  
of 2M LiNO<sub>3</sub>, and remove O with N. The anodic-cathodic  
polarization is used, the back course from the 8th winding  
of the potentiometric wire. E. Erdős

CZECH

Hygienic report of polymerization and weaving of caprolactam. J. Roubal, V. Sedlce, and V. Valák (Ústav hygieny práce, Prague). *Českoslov. hyg. epidemiol., mikrobiol., imunol.* 4, 86-79(1955).--The av. concn. of caprolactam (I) in the atm. of the polymerization and weaving departments was 20-30 mg./cu. m. The workers inhaled 0.1-0.2 g. of I daily. No I wa. found in the urine which did not show any discrepancies in amino N compared with that of unexposed persons. On the basis of expts. with animals and subjective sensation of the employee, I showed a small effect as a potential poison. Further improvements of the hygienic conditions are suggested. L. J. Urbánek

VASAK, V.

✓ Impregnation of wood with calcium thioarsenate. F. Pekný, J. Kocubal, V. Šedivec, V. Vašček, and F. Zachálek (Ústav lesn. práce, Prague). *Českoslov. hyg. epidemiol. mikrobiol., in anal.* 4, 276-44 (1968). - A 3% aq. soln. of Ca thioarsenate (I) as well as aq. exs. of wood impregnated with I produced severe inflammation of the skin of dogs and rabbits leading to surface ulcers. Approx. 10-36 hrs. after the application of 0.2 ml. of a 3% soln. of I to the skin, the dogs excreted 1.2-4.16 mg. As per l. of urine. Hygienic aspects of the technological process of wood impregnation are discussed and preventive measures are suggested. L. J. Uršáček

**"APPROVED FOR RELEASE: 08/31/2001**

**CIA-RDP86-00513R001858720001-9**

**APPROVED FOR RELEASE: 08/31/2001**

**CIA-RDP86-00513R001858720001-9"**

VASAK, V.

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and  
Their Application - Part 1. - Safety and Sanitation  
Techniques.

H-6

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 21911

Author : Jan Roubal, Vl. Vasak

Inst : -

Title : Notes Concerning Work Hygiene in Chemical Factories in  
German Democratic Republic.

Orig Pub : Pracovni lekar., 1957, 9, No 3, 241-251

Abstract : The organization of the labor protection service in the  
chemical industry of GDR is described. The measures of  
labor protection in various branches of the chemical in-  
dustry, as well as at planning and erection of chemical  
factories, at the work with industrial raw materials, the  
sanitation demands at separate chemical processes of Al,  
Cr and Mn compounds, polyvinylchlorides, caprolactam, poly-  
acrylnitril, synthetic rubber and other production are

Card 1/2

*VASAK, Vladimír*  
ROUBAL, Jan; VASAK, Vladimír

Various operational tasks in industrial hygiene. Pracovní lek. 9 no.5:  
442-446 Nov 57.

1. Ustav hygieny prace a chorob z povolani v Praze.  
(INDUSTRIAL HYGIENE,  
problems in var. indust.  
applied aspects (Cz))

VASAK, Vladimir, D.Sc Inz.

Activity of the Research Station on Hemp and Flax. Vestnik CSAZV  
7 no.10: 541-544 '60. (EEAI 10:3)

1. Vyzkumna stanice pradnych rostlin Ceskoslovenske akademie  
zemedelskych ved, Sumperk-Temenice.  
(Czechoslovakia--Hemp) (Czechoslovakia--Flax)

VASAK, V.

H-6

Country : Czechoslovakia  
Category= :

39155

Abs. Jour. :

Author : Vasak, V.; Vasak, V. and Novakova, O.; Vasak, V.; and  
Institut. : Not given

Title : Analysis of Industrial Atmospheres. I. [No subtitle].  
II. Determination of Nitrobenzene. III. Determina-  
tion of Lead. IV. Absorption of Toxic Substances in  
Orig. Pub. : Wash Bottles Equipped with Porous Plugs.  
Pracovní Lekar, 9, No 4, 339-346; No 5, 440-441; No  
6, 547-549 (1957)

Abstract : I. The author discusses briefly the problems in-  
volved in the analysis of industrial atmospheres  
(sampling techniques, determination of gas volume,  
preparation of equipment, selection of proper analy-  
tical procedures). A brief evaluation of various  
analytical procedures is given; among the procedures  
discussed are photometry, spectrography, colorimetry,  
and polarography. Schematic diagrams of a number of  
analyzers are included.  
II. The authors describe a polarographic method for  
the determination of nitrobenzene (I) in industrial  
atmospheres, based on the reaction of I with pyridine

Card: 1/4

\* Novakova, O. H-12



Country : Czechoslovakia  
Category :

n-c

Abs. Jour. :

39155

Author :  
Institut. :  
Title :

Orig Pub. :

Abstract : the gas is passed through at a flow rate of 62.5 ml/  
min. A diagrammatic sketch of an arrangement which  
makes possible the photographic recording of the  
bubbles is included.

T. Brzhevskaya

Card: 4/4

COUNTRY : Czechoslovakia  
CATEGORY :

R-6

ABS. JOUR. : RZKhim., No. 22 1959, No.

75070

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT

: was mixed with the surrounding air immediately on entry by the use of a table-type ventilator. The gas was analyzed with an IR analyzer, the operation of which is based on the fact that the IR rays passing through measuring cells containing air and the gas to be analyzed produce different amounts of heating thus setting up a pressure differential between the two cells. The analyzer used made it possible to measure CO concentrations in air as low as 0.0005% by volume. The

CARD: 1/2

176

VASAK, V. OPPL, L.

"Measuring the intensity of ventilation by an indirect method." p.2.

ZDRAVOTNI TECHNIKA A VZDUCHOTECHNIKA (Ceskoslovenska akademie ved. Ceskoslovenska vedecka technicka spolecnost pro zdravotni techniku a vzduchotechniku) Praha, Czechoslovakia, Vol. 2, no. 1, 1959

Monthly List of East European Ac essions (EEAI) LC, Vol. 8, No. 6, June 1959

Uncl.

VASAK, V.

AGRICULTURE

PERIODICAL:: VESTNIK, VOL. 6, No. 2, 1959

Vasak, V.; Rataj, K. New possibilities in the struggle against  
laying down of flax and news concerning flax protection.  
p. 81

Monthly List of East European Accessions (EEAI) LC Vol. 8, no. 5  
May 1959, Unclass.

~~VASAK~~ VASAK, VLADIMIR

SURNAME, Given Names

(1)

Country: Czechoslovakia

Academic Degrees (not given)

Affiliation: Institute for Employment Hygiene and Occupational Diseases (Ústav hygieny práce a chorob z povolání) Prague

Source: Prague, Ceskoslovenska Hygiene, Vol VI, No 7, Aug 61, pp397-401

Data: "Hazards of Carbon Disulphide and Technical Protection Measures in Establishment using Continuous Spinning Machines"

ROUBAL, Jan

OPPL, Ladislav

VASAK, Vladimir

870 981643

VASAK, Vladimir, C.So.Inz.: LAHOLA, Josef, Inz.

Mechanized flax pulling and binding. Vestnik CSAZV 8 no.4:201-203  
'61. (EEAI 10:6)

1. Vyzkumna stanice pradnych rostlin Ceskoslovenske akademie  
zemedelskych ved, Sumperk-Temenice.  
(Czechoslovakia--Flax)

3

CZECHOSLOVAKIA

ROUBAL, J; VASAK, V; KOTTELLOVA, B.

Institute of Industrial Hygiene and Occupational Disease  
(Ustav hygieny prace a chorob z povolani), Prague  
(for all)

Prague, Czechoslovenska hyziena, No 5, 1963, pp 265-272

"Hygienic Problems Associated with the Production of Viscous  
Cords."

ROUBAL, J.; VASAK, V. - KIMMELOVA, B.

Hygienic problems associated with the production of viscous  
cords. Cesk. hyg. 8 no.5:265-272 Je '63.

1. Ustav hygieny prace a chorob z povolani, Praha.  
(INDUSTRIAL MEDICINE) (SULFIDES) (URINE)



VASAK, V.

[CZECHOSLOVAKIA]

A. DAVID, A. FUCHS, I. PACIKER and V. VASAK. [Citation not stated.]

"Carbon Sulfide."

Prague, *Pracevní Lékařství*, Vol. 15, No. 1, Jan 1963; Pt. 1-2 of separately  
paginated section "Reviews" (Přehledy).

Abstract: Twelve physicochemical properties of CS<sub>2</sub> are tabulated;  
maximal allowable concentration is now 50 mg. per square meter in  
Czechoslovakia, 10 in USSR, 30 in Great Britain, 60 in U.S.; planned  
OSHA norm will be 10; industrial and technical uses of the compound and  
precautions in working with it are enumerated; also analytical methods  
and toxicology tests, biological exposure tests, preventive steps and  
counterindications are listed. Seven Czech, 1 Soviet, 10 Western ref's.

1/1

- END -

2434

380: 2000-X

DAVID, A.; FUCHS, A.; PACHNER, P.; VASAK, V.

Mercury (metal). Prac. lek. 15 no.2:suppl:3-4 Mr '63.

"(MERCURY) (AIR POLLUTION)

CZECHOSLOVAKIA

VASAK, V. Dr of Natural Sciences, Institute of Work Hygiene and Occupational Diseases (ústav hygieny prace a chorob z povolani), Prague, Professor Dr J. TEISINGER, Dr of Sciences, director.

"Assessment of the Exposure of Workers to Carbon Disulfide Vapors. Part 1. Introductory Communication"

Prague, Pracovní Lékarství, Vol XV, No 4, May 63, pp 143-145.

Abstract [Author's English summary, modified]: In addition to an atmosphere analysis the exposure test is recommended. Used for the test is the iodine azide reaction based on the finding that carbon disulfide metabolites, containing bivalent sulfur, catalyze the oxidation of sodium azide by iodine. Nitrogen is liberated and the iodine solution reduced to colorless iodine. Estimation of metabolites in urine by this method is more simple and accurate than other methods. Outlined are further studies on this subject. Thirty-nine references, including 11 Czech.

D/1

CZECHOSLOVAKIA

Prague, Pracovní lékařství, Vol IV, No 4, May 63, pp 145-149.

bolites in urine. The content of carbon-disulfide metabolites in urine was assessed according to the duration of the iodine azide reaction made on a urine specimen collected during the last two hours of exposure. Dilution of urine was assessed on the basis of the creatinine concentration. Both values were used for calculating an exposure coefficient. A method of the exposure test is proposed. Five references, including 1 Czech, 1 Polish and 1 Russian.

2/2

VASAK, Vladimir, PhMr., HNDr., CSc. (Praha 2, Slezska 60)

The determination of nitrates in the urine as an exposure  
test in work with dinitrodiglycol. Prac. lek. 17 no.2:  
47-50 Mr'65.

1. Ustav hygieny prace a chorob z povolani v Praze (reditel:  
prof. dr. J. Teisinger, DrSc.).

VASALATIIY, I.L.

Electrically driven bitumen spreaders. Suggested by I.L.  
Vasalatii. Rats.i izobr.predl.v stroi. no.8:83-85 '58.  
(MIRA 13:3)

1. Po materialam Kishinevskogo gorodskogo obshchestroitel'-  
nogo tresta "Gorgrazhdanshilstroy."  
(Bitumen)

VASANOV, Yu A.; ZHULEV, YU. G.

"Optimum contour heat rejection triangular fins with mutual irradiation between fin and cooled base surfaces."

report submitted for 15 th Intl Astronautical Cong, Warsaw, 7-12 Sep 64.

ACCESSION NR: AP4041843

S/0281/64/000/003/0391/0400

AUTHOR: Vasanov, Yu. A. (Moscow); Zhulev, Yu. G. (Moscow)

TITLE: Optimal form of triangular radiating fins taking into account the mutual irradiation of the fins and the cooled surface

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 3, 1964, 391-400

TOPIC TAGS: heat conduction, thermal radiation, radiating fin, triangular radiating fin, fin shape, cooling fin

ABSTRACT: The authors consider a plane problem involving the determination of the optimal dimensions and number of radiating triangular fins, arranged in star-shaped fashion at the apices of a multilateral prism, taking into account the mutual irradiation of these ribs and the faces of the cooled prism (see Figure 1 of the Enclosure). Thin fins are considered, for which the law of heat radiation and the heat conductivity equation along the fin are valid in the following form:

$$\frac{1}{2} Q(x) = -\lambda (L-x) \frac{\alpha}{2} \frac{dT}{ds}, \quad (1)$$

$$\frac{1}{2} dQ(x) = -q(x) ds, \quad (2)$$

1/3

Card



ACCESSION NR: AP4041643

where  $Q(x)$  is the heat flow through the fin section with coordinate  $x$ ;  $\lambda$  is the thermal conductivity of the fin material;  $\alpha$  is the angle between the lateral surfaces of the fin; and  $q(x) dx$  is the resultant radiation of the fin surface element with allowance made for the mutual irradiation of the fins and the prism faces. Pertinent equations are obtained and the numerical results of computations based on these formulae are presented in the form of graphs. Orig. art. has: 16 figures and 25 formulas.

ASSOCIATION: None

SUBMITTED: 09Oct63

ENCL: 01

SUB CODE: TD

NO REF SOV: 002

OTHER: 003

2/3

Card

VASANOV, Yu.A. (Moskva)

Characteristics of the thermal radiation of a system of star-shaped  
radiators. Izv. AN SSSR. Energ. i transp. no.5:626-635 S-O '64.  
(MIRA 17:12)

27

in the case of the

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thermal radiation of the

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ACCESSION NR: AP5002720

... is negligible small as ...  
... which were calculated for ...

... 1962, 41 which were calculated for ...



geometric parameters. 1 - coating; 2 - rim.

Card 3/3

VASANOVA, L.K., inzhener; GLAZKOV, P.G., inzhener; ZHEVAKHOV, D.S., kand.  
tekhn.nauk.

Protecting drop-type cooling towers from freezing. Elek.sta. 28  
no.8:13-15 Ag '57. (MIRA 10:10)  
(Cooling towers)

PETROVSKIY, V.V., kand.tekhn.nauk; VASANOVA, L.K., inzh.; VERNER,  
P.F., inzh.

Use of jalousie ash traps in the fuel bed burning of  
high ash content coal. Elek.sta. 31 no.5:79-81  
My '60. (MIRA 13:8)  
(Ash disposal) (Furnaces)

VASANOVA, L. K. and SHIMANSKIY, Yu. N.

"Investigation of Heat Transfer in a Boiling Layer  
at the Presence of Internal Heat Sources."

Report submitted for the Conference on Heat and Mass Transfer,  
Minsk, BSSR, June 1961.



VASANOVA, L. K., SYROMYATNIKOV, N. I., and SHIMANSKIY, YU. N.

"Study of heat-exchange in the boiling layer in the presence of internal heat sources."

Report presented at the 1st All-Union Conference on Heat- and Mass- Exchange, Minsk, BSSR, 5-9 June 1961

21413

S/089/61/011/006/010/014

B102/B138

21.5230

AUTHORS:

Syromyatnikov, N. I., Vassanova, L. K., Shimanskiy, Yu. N.

TITLE:

Apparatus for studying heat-exchange processes in suspension reactors

PERIODICAL: Atomnaya energiya, v. 11, no. 6, 1961, 544 - 546

TEXT: The Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov) has developed an apparatus for the study of heat transfer in reactors in which the fuel is suspended in, and circulates with, the coolant. It uses an h-f method to investigate heat transfer from the suspended hot particles to the steady-state liquid. For the heat exchange between particles and medium in a "boiling" layer,  $Nu = \alpha d / \lambda$  and  $Pr = \nu / a$ , where  $d$  is particle diameter and  $\alpha$ ,  $\lambda$ ,  $\nu$ , and  $a$  are the coefficients of heat transfer to the medium, and of heat conduction, kinematic viscosity, and thermal diffusivity of the medium, respectively. For simulation of reactor conditions,  $D_r / d \geq 20$ ,  $D_r$  being the reactor dimension. The suspended particles in the apparatus are heated by eddy currents from the h-f magnetic field, to a degree which is

Card 1/3

21413

S/089/61/011/006/010/014

B102/B138

# Apparatus for studying heat-exchange...

dependent on field strength and frequency, and the size and electromagnetic properties of the particles. Since the optimum particle size for simulation also depends on frequency and magnetic susceptibility,  $\mu$  has to be low and  $f$  high, in order to have a low optimum. For  $f = 10^6$  cps and  $\mu = 1$  optimum particle size is 0.3 mm for Cu, while for steel ( $\mu = 100$ ) it is 2.3 cm, and becomes 5 cm at 2 kc. The best materials for the heat-source particles are copper, aluminum, and graphite. The reactor (Fig. 1) consists of a double-walled glass cylinder 2-4 cm in diameter and 30 - 40 cm high. The particles are 0.2 - 2 mm in size. When the heating h-f field is switched off, the transient cooling process is recorded by means of two thermocouples and an electronic voltmeter type ЭПП-09 (EPP-09) or a loop oscillograph.  $\alpha$  is determined by calorimetric measurements, using the relation  $\alpha = Q_s / (t_T - t_f) F$ , where  $Q_s$  is the heat transferred in steady state,  $F$  the total surface of hot particles in the boiling layer,  $t_T$  the surface temperature of the particles, and  $t_f$  the mean temperature of the medium.  $Q_s$  is determined from the nonsteady heat transfer, i. e., from the cooling curve. There are 2 figures, 1 table, and 3 references: 2 Soviet and 1 non-Soviet. The reference to the English-language

Card 2/3

Apparatus for studying heat-exchange...

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S/009/61/011/006/010/014  
B102/B130

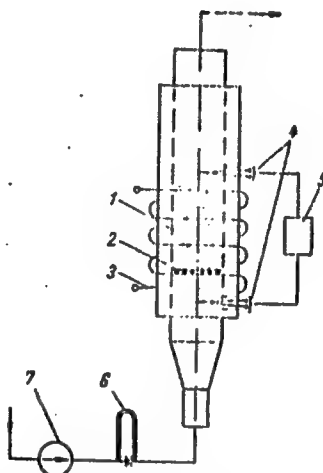
publication reads as follows: J. Morris et al., Trans. Instn. Chem. Engrs, 3, No. 4, 168 (1956).

Fig. 1

SUBMITTED: March 28, 1961

Legend to Fig. 1:

(1) Particle suspension,  
(2) base grid, (3) in-  
ductor, (4) thermo-  
couples, (5) electronic  
voltmeter, (6) flow-  
meter, (7) pump.



Card 3/3

X

VASANOVA, L.K.; SHIMANSKIY, Yu.N.; SYROMYATNIKOV, N.I.

Temperature measurement in polydisperse media during induction heating. Inzh.-fiz.zhur. 5 no.4:82-85 Ap '62. (MIRA 15:4)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova, Sverdlovsk.  
(Temperature Measurement) (Induction heating)

VASANOVA, L.K.; SYROMYATNIKOV, N.I.

Analyzing the heat exchange between solid particles and gas  
in a fluid bed by the method of internal heat sources. Khim.prom.  
no.11:850-852 '63. (MIRA 17:4)

SYROMYATNIKOV, N. I.; VASANOVA, L. K.; RUBTSOV, G. K.; SHIMANSKIY, Yu. N.

"Problems of heat transfer in a fluidized bed."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12  
May 1964.

Ural' Polytechnic Inst.

VASANOVA, L.K.; SYROMATNIKOV, N.I.

Steady heat transfer between particles and a gas in a fluidized bed.  
Inzh.-fiz. zhur. 7 no.2:29-32 F '64. (MIRA 17:2)

1. Ural'skiy politekhnicheskii institut imeni Kirova, Sverdlovsk.



SHIMANSKIY, Yu.N., inzh.; VASANOVA, L.K., inzh.; KIRPICHNIKOV, V.M.,  
kand. tekhn. nauk; SYROMYATNIKOV, N.I., doktor tekhn. nauk

Measurement of temperature in unsteady thermal processes.  
Teploenergetika 11 no.3:93-94 Mr '64. (MIRA 17:6)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova.

ACCESSION NR: AT4042316

S/0000/63/003/000/0377/0380

AUTHOR: Vasanova, L.K., Sy\*romyatnikov, N.I., Shimanskly, Yu. N.

TITLE: The problem of temperature measurement in non-stationary processes in the presence of a magnetic field

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy\* magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady\* soveshchaniya, v. 3. Riga, Izd-vo AN LatSSR, 1963, 377-380

TOPIC TAGS: thermometry, temperature measurement, thermocouple, heat transfer, hydromagnetics, eddy current, induction heating

ABSTRACT: The study of heat transfer between particles and suspending medium in the boiling layer is normally conducted under non-stationary or quasi-stationary conditions or during drying processes. The authors of the present article have developed another, fundamentally different, method which has as its distinguishing feature the fact that the eddy currents, induced by a magnetic field and constituting the internal heat sources, heat particles of a non-magnetic material and create a constant thermal flow from the particles to the suspending medium. The difficulties connected with the noise

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1/4

ACCESSION NR: AT4042316

caused by the field and also with the eddy-current heating of thermocouple junctions (even with a thermoelectrode diameter of 0.05 mm) have been considered. The use of a high-frequency magnetic field (300-600 kc) results in an inevitable and regular heating of the junction of an inertia-free thermocouple and, consequently, to an error in its readings in the measurement of temperature. A detailed discussion of the problem of avoiding the heating of the thermocouple and of the various techniques thus far in use to achieve this effect (all of them basically unsatisfactory) is given. The authors developed a method for measuring cooling media by means of thermocouples protected by a flowing inertia-free screen from the high-frequency magnetic field. A distinguishing feature of the method is its ability to measure true temperature values of cooling media both in stationary as well as in rapidly occurring non-stationary processes while preserving the non-inertial thermal properties of the thermocouples. Two versions of the junction shielding principle are considered: a no-frame coil technique and a self-shielding technique (see Figure 1 of the Enclosure). The effect of these screens is said to be similar to that of a continuous shielding. The authors verified the efficiency of this method of screening the junctions of thermocouples in the study of heat transfer from the particles of a boiling layer to the air and to water in the magnetic field of a hardening generator (500 kc). In their work with

Card

2/4

ACCESSION NR: AT4042316

non-stationary processes, in place of cumbersome and expensive DC amplifiers, the authors employed a system consisting of a test unit, the first amplification stage of a type EPP-09 electronic potentiometer and a special electronic adapter which is, in reality, an additional amplification stage. The tests they conducted demonstrated the feasibility of using this arrangement for the oscillographic recording of heating processes with the magnetic field connected and of cooling processes with the field removed, for example, even in a temperature range of 5-15C and with a process occurrence rate of less than 2 seconds. The methods discussed in this article for the measurement and recording of temperatures are applicable to the investigation of heat transfer processes in the induction heating of continuous, porous and polydispersed media. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 04Dec63

ENCL: 01

SUB CODE: TD, EM

NO REF SOV: 003

OTHER: 000

Card 3/4

ACCESSION NR: AT4042316

ENCLOSURE: 01

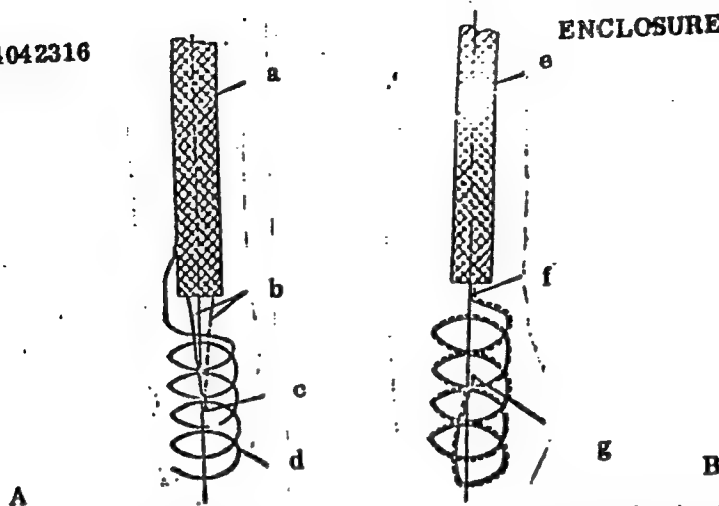


Fig. 1. Thermocouple shielding variants: A - by means of a coil without a frame; B - by means of self-shielding (Keyed lettering: a - grounded metallic brading; b - thermoelectrodes; c - junction of thermocouple; d - screening coil; 3 - grounded metallic brading; f - thermoelectrodes forming screening coil; g - junction of thermocouple)

Card 4/4

SHIMANSKIY, Yu.N.; VASANOVA, L.K.; KIRICHNIKOV, V.M.; SYROMYATNIKOV, N.I.

Unit for high-speed recording of minor changes in temperatures.  
Izv.vys.ucheb.zav.; prib. 7 no.2:154-157 '64.

(MIRA 18:4)

1. Ural'skiy politekhnicheskii institut imeni Kirova. Rekomendovana kafedroy teoreticheskikh osnov teplotekhniki.

VASANOVA, L.K.

Height of active heat exchange zone in a fluidized bed. Tsvet.  
met. 38 no.2:44-47 F 165. (MIRA 1973)

SYROMYATNIKOV, N.I.; BASKAKOV, A.P.; VASANOVA, L.K.; SHIMANSKIY, Yu.N.

S.S. Zabrodskii's monograph on "Hydrodynamics and heat transfer  
in a fluidized bed." Inzh.-fiz. zhur. 8 no.3:413-414 Apr '65.  
(MIRA 18:5)



VASANOVA, L.K.; SYROMYATNIKOV, N.I.

Heat exchange between particles and gas in a fluidized bed. Zhim. i  
tekh. topl. i masel 10 no.7:16-19 JI '65. (MIRA 18:9)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.

L 10273-66 EWT(d)/EWT(1)/EPF(n)-2/ETC(m) IJP(c) WW

ACC NR: AP6000035

SOURCE CODE: UR/0115/65/003/010/0054/0055

AUTHOR: <sup>44,55</sup>Shimanskiy, Yu. M.; <sup>44,55</sup>Syromyatnikov, N. I.; <sup>44,55</sup>Vasanova, L. K.

ORG: none

TITLE: Measuring temperature in a high-frequency magnetic field

<sup>21,44,55</sup>SOURCE: <sup>21,44,55</sup>Izmeritel'naya tekhnika, no. 10, 1965, 54-55

TOPIC TAGS: temperature measurement, rf magnetic field

ABSTRACT: Difficulties of measuring temperature in r-f magnetic fields by known methods of shielding are described. A new inertialess loose-coil shield 1 (see figure) covers thermocouple 2 whose leads 3 are protected by grounded metal braiding 4. The thermocouple is intended for measuring temperature of cooling liquids working in rf fields. The efficiency of this shielding was experimentally verified in studying the heat exchange between a boiling layer and air and water in a magnetic field of a 500-kc induction-hardening oscillator. Orig. art. has: 1 figure.



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